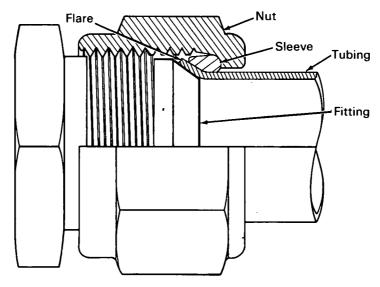
NASA TECH BRIEF



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New Nut and Sleeve Improve Flared Connections



The problem: In standard stainless steel flared tube connections, nonconcentricity and misalignment of the tube flare in relation to the fitting is frequently encountered. These conditions contribute to a poor seal and short component life because the forces on the mating surfaces of the tube and fitting are not uniformly applied.

The solution: An improved nut and sleeve that allow forces on the mating surfaces to be uniformly applied.

How it's done: The redesigned nut and sleeve provide for a spherical mating surface between the two as opposed to the plane mating surfaces of a standard nut and sleeve. This spherical surface creates a better connection between the tube and fitting in the case of a nonconcentric or misaligned flare on the tube. With uniform compression of the tubing, the seal is greatly improved and component life is increased significantly.

Notes:

- 1. The improved nut and sleeve mate with standard fittings.
- 2. This innovation should be of interest to manufacturers of pressurized fluid systems such as refrigeration and air conditioning and hydraulic systems.
- 3. Inquiries concerning this innovation may be directed to:

Technology Utilization Officer Marshall Space Flight Center Huntsville, Alabama, 35812. Reference: B65-10180

Patent status: NASA encourages commercial use of this innovation. No patent action is contemplated.

Source: J. S. Garrard (M-FS-194)

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